

Work Order ID 133546

Wednesday, June 10, 2015 8:04:50 AM

133546

Page 1

Item ID: D5106-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bracket
 Start Date: 6/10/2015 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 6/10/2015 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: MLS Date: JUN 10 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D5106	A

100 0.00

100
 Bandsaw Memo 0.00 2 10 inf
 Jeaspa Bandsaw Cut blank to 2.63" long 15/06/12

110 0.00

110
 HAAS 1 Memo 0.00 2 10 inf
 HAAS CNC vertical machine #1 1-MILL as per folio FB332&dwg. 15/06/12
 FOLIO REV: AA
 DWG REV: A
 2-Deburr as required

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
☐ OTHER : _____					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified ☐	☐	Past Due	☐				

Work Order ID 133546***133546***

Page 3

Item ID: D5106-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bracket

Start Date: 6/10/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 6/10/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

140

Identify as per dwg & Stock Location: _____

0.00

140

Packaging

Memo

0.00

Packaging

N/A

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

15.06.16

Manufacture for tooling use only.

Changed to LF Gg + fixtures.

15-6-17

DQA: _____ Date: _____



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OTHER : ☐					

Picklist Print

Wednesday, June 10, 2015 8:04:52 AM

Page 1

Work Order ID: 133546

133546

Parent Item: D5106-1

D5106-1

Parent Item Name: Bracket

Start Date: 6/10/2015

Required Date: 6/10/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV A RQ VERIFIED BY DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303B2.000X1.750		Purchased			No	100	f	12.7333	0.219	1			

M303B2 000X1 750

303 BAR 2" X 1.750"

Location

Loc Qty

Loc Code

MAT008

12.7333

→ m129286

0.9

m132117

11.8333

.5

am 15/06/12

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

DART AEROSPACE LTD		Work Order:	133576
Description: Upper Rail		Part Number:	D5106-1
Inspection Dwg: D5106	Rev: A	Page 1 of 1	

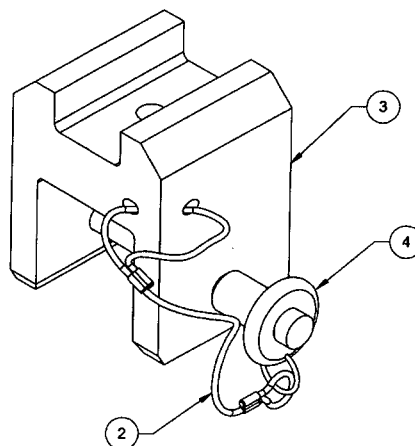
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.780	+/-0.010	0.780	✓		Caliper	JCL -08
0.49	+/-0.030	0.488	✓		"	
0.25 x 45°	+/-0.030 x +/-0.5°	0.250	✓		"	
0.780	+/-0.010 +/-0.020	0.780	✓		H.G.	31006
0.575	+/-0.010	0.575	✓		Caliper	JCL -08
1.150	+/-0.010	1.150	✓		"	
0.300	+/-0.010	0.300	✓		"	
2.18	+/-0.030	2.180	✓		"	
Ø0.257	+0.006/-0.001	0.258	✓		"	
0.75	+/-0.030	0.752	✓		"	
0.07 x 30°	+/-0.030 x +/-0.5°	0.077	✓		"	
0.38	+/-0.030	0.376	✓		Dep't Gauge	JCL -09
0.200	+/-0.010	0.191	✓		Mic.	JCL -01
0.375	+/-0.010 +/-0.020	0.384	✓		Dep't Gauge	JCL -09
1.23	+/-0.030	1.232	✓		"	
0.23	+/-0.030	0.230	✓		Caliper	JCL -08
1.50	+/-0.030	1.503	✓		"	
1.75	+/-0.030	1.753	✓		"	
0.75	+/-0.030	0.749	✓		"	
Ø0.257	+0.006/-0.001	0.258	✓		"	
Ø0.625	+0.008/-0.001	0.628	✓		"	
0.2	+/-0.100	0.199	✓		H.G.	31006
0.7	+/-0.100	0.700	✓		Caliper	JCL -08
Ø0.129	+0.005/-0.001	0.129	✓		"	

Measured by: J.C.-L	Audited by:	Preliminary Approval:
Date: 15/06/16	Date:	Date:

Rev	Date	Change	Revised by	Approved
A	14.08.27	New Issue	KJ	

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D5106-041	BRACKET ASSEMBLY
2	1	D2690-6	LANYARD ASSEMBLY
3	1	D5106-1	BRACKET
4	1	MS17984-C418	PIN, QUICK RELEASE (NASM17984-C418)



D5106-041 BRACKET ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.84 lbs
- 8) ASSEMBLE D2690-6 IN CONJUNCTION WITH D5106-1 & MS17984-C418
- 9) ENSURE THAT MS17984-C418 PIN CAN BE REMOVED FROM HOLE COMPLETELY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 133546 MJS
1506-10

RELEASED
2014-07-24

A		NEW ISSUE		RF	14.04.11
REV.		DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWN	RF				
CHECKED	VS	DRAWING NO.		REV. A	
MFG. APPR.	JLM	D5106		SHEET 1 OF 2	
APPROVED	HS	TITLE		SCALE	
DE APPR.	DS	BRACKET ASSEMBLY		NTS	
DATE		14.04.11		COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

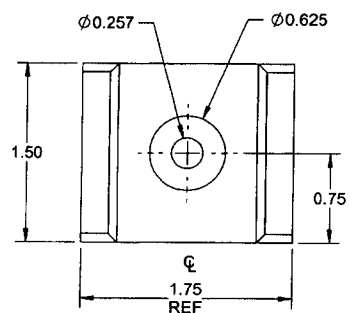
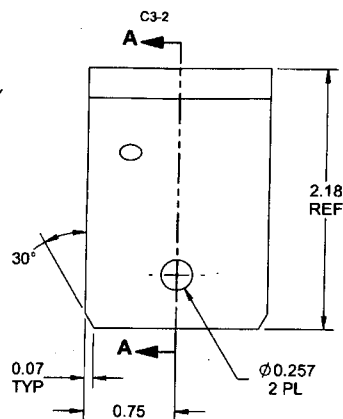
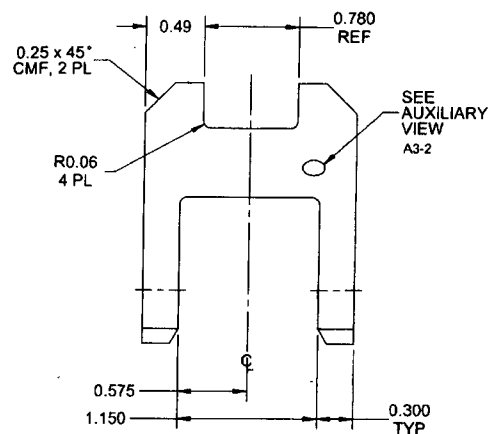


WORK ORDER NON-CONFORMANCE / UPDATE

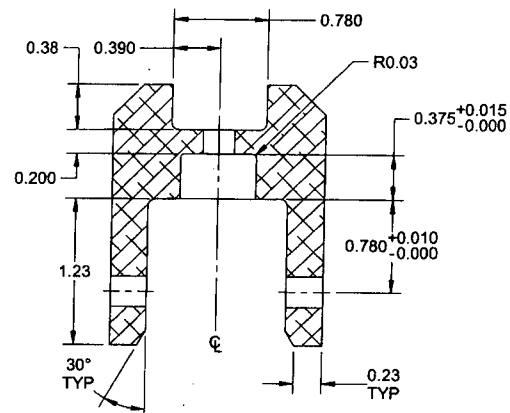
QA Closed: _____ Date: _____

Work Order update only ☐

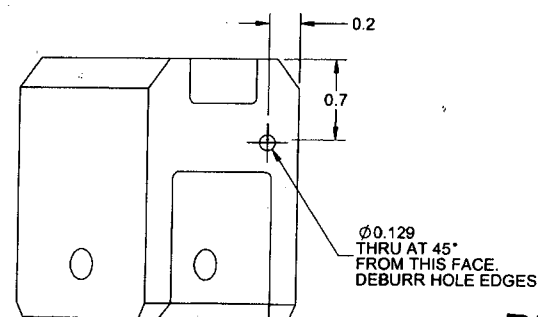
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OTHER : ☐					



D5106-1 BRACKET



SECTION A-A D5-2



AUXILIARY VIEW D6-2

NOTES:

- 1) MATERIAL: AISI 303/304/316 SS BAR
PER ASTM A582 OR ASTM A240 OR ASTM A276
REF DART SPEC M303B OR M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.83 lbs

RELEASED
2014-07-24

APPROVED	DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	RF		
	CHECKED	VS	DRAWING NO.	REV. A
	MFG. APPR.	JLM	D5106	SHEET 2 OF 2
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	BRACKET ASSEMBLY	NTS
DATE		14.04.11	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR OFFERED OR COMMINGLED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	